Prop 13
Urban Water Conservation
Capital Outlay Grant

San Diego County Water Authority

Coin-Operated Multi-Load
Clothes Washer
Voucher Incentive Program

March 2002

Consolidated Water Use Efficiency 2002 PSP

Proposal Part One:

A. Project Information Form

1.	Applying for (select one):	x (a) Prop 13 Urban Water Conservation Capital Outlay Grant (b) Prop 13 Agricultural Water Conservation Capital Outlay Feasibility Study Grant (c) DWR Water Use Efficiency Project
2.	Principal applicant (Organization or affiliation):	San Diego County Water Authority
3.	Project Title:	Coin-Operated Multi-Load Clothes Water Voucher Incentive Program
4.	Person authorized to sign and submit proposal:	Ken Weinberg, Director of Water Resources 4677 Overland Ave, San Diego, CA 92123 (858) 522-6741 (858) 268-7881 kweinberg@sdcwa.org
5.	Contact person (if different):	Rose M. Smutko, Assistant Water Resources Specialist 4677 Overland Ave., San Diego, CA 92123 (858) 522-6756 (858) 268-7881 rsmutko@sdcwa.org
6.	Funds requested (dollar amount):	$350,000
7.	Applicant funds pledged (dollar amount):	$186,320 (entire CII Program -- $810,000)
8.	Total project costs:	$536,320
9.	Estimated total quantifiable project benefits (dollar amount):	$505,393
	Percentage of benefit to be accrued by applicant:	100%
	Percentage of benefit to be accrued by CALFED or others:	CALFED receives the non-quantified benefits listed in the Benefits and Costs section of the proposal.

10.	Estimated annual amount of water to be saved (acre-feet):	Annual Average of 111 AF
	Estimated total amount of water to be saved (acre-feet):	Lifetime Average of 1,108 AF
	Over 10 years	
	Estimated benefits to be realized in terms of water quality, instream flow, other:	▪ Improve water quality for all uses by reducing demands on the Delta during those times of year when water diversions can contribute to elevated salinity levels. ▪ Improve and increase aquatic habitats and ecological functions in the Bay-Delta by reducing the need for water diversions during dry years and dry periods, when the impact diversions on fish are the highest; ▪ Reduce the mismatch between the Bay/Delta water supplies and current projected beneficial uses by providing a new water supply that can be used to meet a portion of existing and future demands.
11.	Duration - (month/year to month/year):	September 2002 to March 2004
12.	State Assembly district(s) where the project is to conducted:	State Assembly districts - 66th, 73rd, 74th, 75th, 76th, 77th, 78th, 79th
13.	State Senate district(s) where the project is to be conducted:	State Senate districts -36th, 37th, 38th, 39th, 40th
14.	Congressional district(s) where the project is to be conducted:	Congressional districts - 48th, 49th, 50th, 51st, 52nd
15.	County where the project is to be conducted:	San Diego County
16.	Date most recent Urban Water Management Plan submitted to the Department of Water Resources	December 2000
17.	Type of applicant (select one):	ÿ (a) city
	Prop 13 Urban Grants and Prop 13 Agricultural Feasibility Study Grants:	ÿ (b) county ÿ (c) city and county ÿ (d) joint powers authority

		x (e) other political subdivision of the State, including public water district
		ÿ (f) incorporated mutual water company
		ÿ (g) investor-owned utility
	DWR WUE Projects: the above entities (a) through (f) or:	ÿ (h) non-profit organization
		ÿ (i) tribe
		ÿ (j) university
		ÿ (k) state agency
		ÿ (l) federal agency
18.	Project focus:	ÿ (a) agricultural
		x (b) urban
19.	Project type (select one):	x (a) implementation of Urban Best Management Practices
	Prop 13 Urban Grant of Prop 13 Agricultural Feasibility Study Grant capital outlay project related to:	ÿ (b) implementation of Agricultural Efficient Water Management Practices
		ÿ (c) implementation of Quantifiable Objectives (includes QO number(s))
		ÿ (d) other (specify)
		ÿ (e) implementation of Urban Best Management Practices
		ÿ (f) implementation of Agricultural Efficient Water Management Practices
	DWR WUE Project related to:	ÿ (g) implementation of Quantifiable Objectives (includes QO number(s))
		ÿ (h) innovative projects (initial investigation of new technologies, methodologies, approaches, or institutional frameworks)
		ÿ (i) research of pilot projects
		ÿ (j) education or public information programs
		ÿ (k) other (specify)
20.	Do the action in this proposal involve physical changes in land use, or potential future changes in land use?	ÿ (a) yes
		x (b) no

Consolidated Water Use Efficiency 2002 PSP

Proposal Part One

B. Signature Page

By signing below, the official declares the following:

The truthfulness of all representations in the proposal;

The individual signing the form is authorized to submit the proposal on behalf of the applicant; and

The individual signing the form read and understood the conflict of interest and confidentiality section and waives any and all rights to privacy and confidentiality of the proposal on behalf of the applicant.

_____ Ken Weinberg, Director of Water Resources

Signature Name and title

_____

Date

PROPOSAL PART TWO

Project Summary

The San Diego County Water Authority (Authority) proposes to operate a project to provide $775 vouchers plus a $55 administrative fee for 500 multi-load, coin-operated clothes washers (MLs) in the San Diego region. The most cost-effective method to implement the pilot project is to operate within the Authority's existing Commercial, Industrial, Institutional (CII) Voucher Incentive Program. The pilot project will provide incentives to Laundromat owners to replace inefficient single-load, top-load, coin-operated clothes washers (STLs) with highly efficient MLs. Focus groups and the low participation from Laundromat owners in the existing voucher program for single-load, high-efficiency clothes washers (HEWs) indicate that vouchers for MLs need to be at a higher dollar incentive to encourage the purchase of the more expensive MLs.

A. Scope of Work: Relevance and Importance

1. Nature, scope, and objectives of the project

The Authority has extensive experience managing water conservation projects. With Proposition 13 funding, the project could be expanded to help realize greater water savings sooner than would be provided by our limited local resources. The larger dollar amount will allow financial incentives to encourage customers to install water and energy efficient washers. Reducing water use is a low cost new water supply. We anticipate the project to begin utilizing grant funding in September 2002.

The primary objective is to save water in a cost-effective manner that also meets the needs of the community. MLs have the added benefit of substantial energy savings. Lifetime savings based on a ten-year working life, 5 loads per day, 365 days per year for 500 MLs compared to the same amount of laundry washed in STLs will vary depending on the size and make of the STL and ML machines. Lifetime savings calculated from manufacturer data and usage information from the Laundromat industry yield the following table of savings per machine:

Table 1
Lifetime Water Savings (10 yr.)

Type of Utility	Type of Clothes Washer	
	35-Pound ML	**55-Pound ML**
Water	1.6 Acre Feet (AF)	2.83 AF
Electricity	2,463.8 kilowatts (kWh)	3,759.5 kWh
Gas	13,943.0 Therms	20,823.3 Therms

Water savings for the San Diego region could be realized within a few months of the program's expansion.

2. Critical local, regional, Bay-Delta, State or federal water issues.

Water and energy supply and costs are some of the most critical issues facing California. The San Diego regional population is growing at 2% per year. This factor leads to an increased demand for water and energy at a time when supplies are diminishing from regulatory and market factors. Lack of a reliable supply of water and energy has a severe, negative economic impact on the region.

Water conservation is consistent with the Authority's mission statement to provide a safe and reliable water supply at a reasonable cost. The Authority's Strategic Plan, Water Resources Plan and 2000 Urban Water Management Plan all require full implementation of all applicable Best Management Practices (BMPs) of the Memorandum of Understanding for Urban Water Conservation (MOU). The 2000 Urban Water Management Plan states a water conservation goal from BMP Implementation of 93,200 AF by 2020. This pilot project will provide water savings toward that goal.

Depending on local conditions, between 75 to 95 percent of the water used in San Diego County is imported by the Authority from the Colorado River and Northern California, via the State Water Project. Water saved through the Authority's incentive programs will therefore directly reduce the need for additional imported water supplies from the San Francisco Bay – Sacramento/San Joaquin River Delta (Bay/Delta). The savings represent a net increase in fresh water supplies. Conservation programs developed, as a result of the study will support PROP 13's objectives by doing the following:

- Improve water quality for all uses by reducing demands on the Delta during those times of the year when water diversions can contribute to elevated salinity levels;

- Improve and increase aquatic habitats and ecological functions in the Bay-Delta by reducing the need for water diversions during dry years and dry periods, when the impact diversions on fish are the highest;

- Reduce the mismatch between the Bay/Delta water supplies and current projected beneficial uses by providing a new water supply that can be used to meet a portion of existing and future demands.

B. Scope of Work: Technical/Scientific Merit, Feasibility, Monitoring and Assessment

1. Methods, procedures, and facilities

The pilot project will be incorporated into the Authority's existing CII Voucher Program. Since 1992, this program has been responsible for the installation of 13,321 ultra-low-

flush toilets, 154 urinals, 214 cooling tower conductivity controllers, and 3,543 high-efficiency clothes washers (HEW) in the commercial, industrial, and institutional business sector. The program is managed by Authority staff and consultant-operated. The CII Voucher Program is a $810,000 per year program with Metropolitan Water District of Southern California (Metropolitan) providing $610,000 and the Authority and its member agencies providing the remaining $200,000.

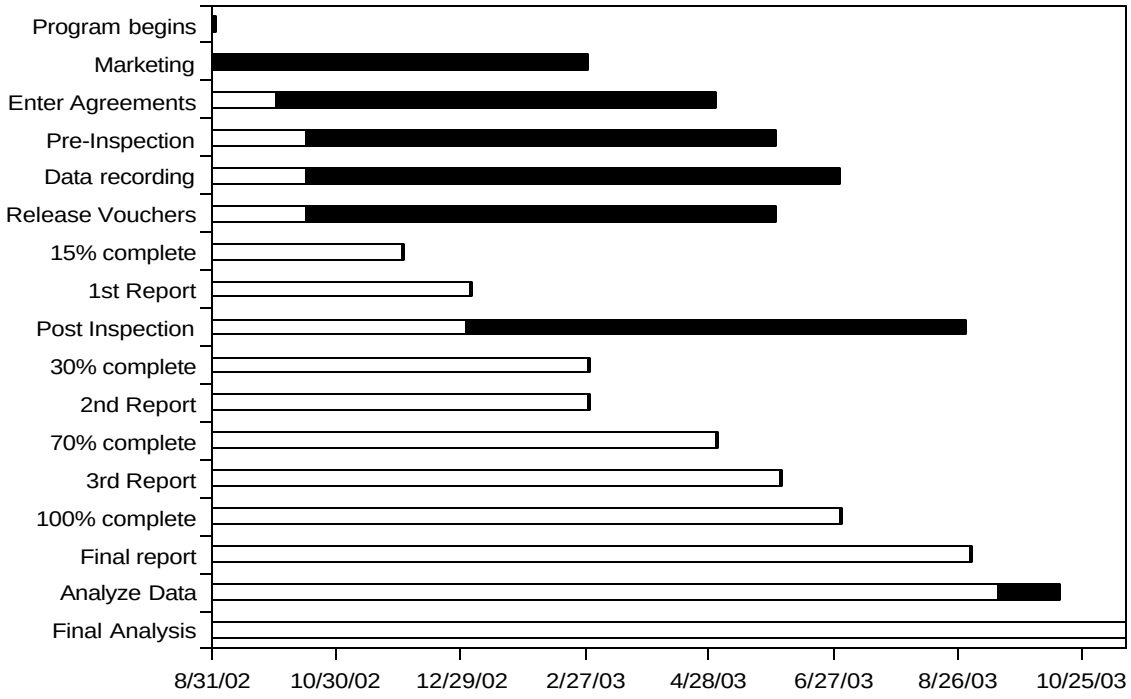
All Authority conservation programs have built-in checks and balances to insure that funds are correctly spent, sites installing devices are inspected, and all data related to devices, voucher recipients and savings are entered into a database for tracking. All data is available in paper and electronic format for ease of analysis. All water and energy savings are calculated on a per device basis under normal use conditions. The information learned will further refine the incentive level and marketing for the CII Voucher Program.

2. Task List and Schedule

The pilot program will be operated via the Authority's ongoing CII Voucher Program. Since funding will not be available until September 2002, the program will continue into FY03. Vouchers will be issued until all 500 vouchers are redeemed. Since the existing program is fully operational, no delays in implementation are expected. Demand is expected to be very high because of continuing energy issues, making unredeemed vouchers unlikely. Because of the expiration dates of the vouchers and due dates for the participating dealers to submit invoices, there is about a three month delay from the time vouchers are issued until invoices are submitted to the Authority.

The contract with the program consultant requires monthly invoices, weekly, monthly, quarterly progress reports, and a final report. As with all programs that the Authority manages with co-funding from other agencies, the Authority pays all invoices to the contractor as vouchers are redeemed. Subsequently, invoices are sent to all co-funding partners on a quarterly schedule. Vouchers and administration fees are invoiced twice a month from the consultant. It is anticipated that water savings verification will be charged at approximately 50 percent for initial data gathering in the first few months of the program, with approximately 50 percent invoiced at the end of the program. (See Figure 1).

Figure 1



3. Monitoring and Assessment

The contractor Scope of Work requires weekly voucher reports with more detailed monthly and quarterly status reports plus annual program reports. Additionally, Authority program managers maintain a close working relationship with the program contractors via frequent telephone calls, e-mails, inspection ride-alongs, and office visits. This program will require 100% inspection of all ML vouchers redeemed to insure installation and to gather data from the customer.

The Authority maintains a Quality Control program consisting of frequent, unannounced ride-alongs of inspections and a complete review of all program documentation. Water Resources staff members who are not part of the conservation section perform Quality Control. All invoices are processed by the Authority program manager, reviewed by a supervisor and if over $10,000, reviewed and signed by the department head. The Authority's Finance Department also conducts random audits of various programs each year performed by an independent, outside firm.

All information is retained in paper and electronic format and is provided to all co-funding partners. The Authority is governed by the Public Information Act making all data available upon written request.

C. Qualification of the Applicants and Cooperators

1. Project Manager resume. See Attachment B.

The Primary Implementer is the San Diego County Water Authority. The mission of the Authority is to provide a safe and reliable supply of water to its member agencies servicing the San Diego region. Demand management, or water conservation, is frequently the lowest-cost resource available to the Authority and its member agencies. Water conservation is a well-established component in ensuring that there will be a reliable water supply in the future for the increasing population and commerce of our local region. Over the long-term, conservation measures serve to defer or limit rate increases by reducing the region's need for other, more expensive supplies and increased infrastructure.

Since the Program's inception, the Authority and its member agencies have provided incentives for the installation of resource-saving devices. Projected water savings and effectiveness are based on industry standard methodologies for calculating savings, as defined by the California Urban Water Conservation Council (CUWCC).

The Authority and SDG&E received the prestigious 2001 Governor's Environmental and Economic Leadership Award for significantly reducing energy and water consumption through the CII Program. Additionally, this Program has been showcased at the California Urban Water Conservation Council Plenary Session in September 2001, as well as the American Water Works Association at the 2001 Fall Conference in Palm Springs, California.

2. External Cooperators

Honeywell DMC Services, Inc. (HDMC) is the current prime consultant for the CII Voucher Program for the Authority. HDMC operates the existing program with a three-year contract, which extends until June 30, 2004.

HDMC has been serving the resource management needs of water, gas, and electric utilities for over 22 years. This includes extensive experience in voucher and rebate processing, measure installations, water and energy surveys, and customers service education and support services. HDMC has developed unmatched expertise in understanding what customers need and delivering above those expectations through the performance of millions of home audit and installation visits.

HDMC has been a pioneer in the water industry for more than 15 years, designing and implementing some of the most successful water conservation programs ever

delivered. HDMC is the premiere voucher-processing vendor in the industry. For each of the clients they serve, HDMC has met or exceeded the Program goals.

Working in cooperation with HDMC is WSA Marketing, a San Diego-based marketing and communications firm. WSA has provided extensive education, outreach, public relations, advertising, and direct-marketing activities on behalf of the Authority's Voucher Incentive Program. At the core of its marketing strategy is the belief that promoting installation of water-efficient fixtures need not be the work of water agencies alone. WSA proposes to utilize its existing relationships with manufacturers and suppliers of fixtures/equipment to increase Program participation and improve point-of-purchase service to water agency customers, thereby expanding the Program's marketing reach.

HDMC and WSA Marketing have created relationships with owners, managers and related customer service supervisors and staff at water-efficient product suppliers from Valley Center to San Ysidro.

Included in their collective network are more than one hundred wholesale and retail locations in the San Diego County with thousands of employees serving Program customers. HDMC and WSA currently has working relationships with more than 300 business owners and key employees at San Diego County wholesale and retail suppliers and an understanding of suppliers' business profiles, sales operations and accounting policies and procedures as they relate to voucher processing.

The Authority will work in conjunction with Metropolitan on the verification of water savings. In the past, Metropolitan has conducted studies of water savings with their own staff, or with qualified consultants. For monitoring purposes, appropriate Laundromat owners will be selected to enter into agreements to conduct machine monitoring at their Laundromats. A spectrum of Laundromats would be selected that represent the socio-economic range of customers in the San Diego region. Water records from business will be obtained. Pertinent data for each machine would be recorded. This will include machine, weight, and type of laundry washed in each machine. Data will be compiled and analyzed data to determine water savings. If water savings parallel preliminary studies, Metropolitan will consider incorporating the multi-loader clothes washer voucher/rebates within their entire service area.

D. Benefits and Costs

1. Budget Breakdown and Justification

Table 2

Item	Amt.	Units	Qty.	Total Cost	Units	Life (yr.)	Present Value	Local Share ($)	PROP 13 Request ($)
a. Direct Labor Hours (Quality Control)									
Monitoring	$600	$/yr	1	$600	$/yr.	2	$600	$600	0
b. Salaries									
Program Mgmt	$20,720	$/yr.	1	$20,720	$/yr.	2	$20,720	$20,720	0
c. Benefits are included in salary and direct labor hours.									0
d. Travel. None.									0
e. Supplies & Expendables. Already included in existing program.									0
f. Services or Consultants									
Program Admin	$55	$/ machine	500	$27,500	$/ machine	NA	$27,500	$27,500	0
Verification of Water Savings	$100,000	$/yr.	1	$100,000	$/yr.	NA	$100,000	$0	$100,000
g. Equipment.									
Multi-load Coin-op HEWs	$500	$/ machine	500	$250,000	$/ machine	10	$250,000	$0	$250,000
h. Other Direct Costs. Remaining monies – less $55 Adm. Fee (see f.) for a total $775 voucher to customer. $275 x 500 MLs =								$137,500	0
i. Total Direct Costs (a. through g.)								$48,820	0
j. Indirect Costs								0	0
k. Total					500	10		**$186,320**	**$350,000**

A brief explanation of the justification of each budget component follows:

Voucher - The proposed voucher level is $775 based upon a combination of factors including the cost per AF of water saved, water agency avoided costs, existing co-funding agreements and the costs and benefits of the ML machines to Laundromat owners. An optimum voucher level will be determined in the future based upon information learned from the proposed Feasibility Study and experience learned from this program.

Administrative Fee - The administrative fee was set at $55 per machine based upon the current charges for other devices in the existing program requiring 100%

inspection. In addition, the inspector will be required to conduct a brief survey of the Laundromat owner or representative.

Authority Staff Time – The proposed PROP 13 funding will comprise 14% of the total CII Voucher Program, therefore, 14% of the CII Voucher Program Manager's time and salary is required for this project. The project manager is expected to dedicate 5% of work time to the project. The Quality Control (QC) staff will be required to inspect at least five sites and review 15% of voucher folders relating to the project. QC effort is expect to consume 5 hours for inspection and 7 hours for document review.

2. Cost Sharing

Metropolitan, the Authority, as well as its member agencies contribute to the existing CII Voucher Program. The Authority member agencies include: Carlsbad Municipal Water District, City of Del Mar, City of Escondido, Fallbrook Public Utility District, Helix Water District, City of Oceanside, Olivenhain Municipal Water District, Otay Water District, Padre Dam Municipal Water District, City of Poway, Rainbow Municipal Water District, Ramona Municipal Water District, Rincon Del Diablo Municipal Water District, City of San Diego, San Dieguito Water District, Santa Fe Irrigation District, Sweetwater Authority, Vallecitos Water District, and Vista Irrigation District. (See Attachment A on page 22 for a map of member agencies noted above). All have expressed their financial support of this program.

San Diego Gas & Electric (SDG&E) provided funding for HEW vouchers for the past four years. At this time, local utilities no longer provide support directly, but rather the California Public Utilities Commission (CPUC) reviews all proposals at the state level. A grant proposal is under consideration by the CPUC for additional marketing for the HEW component of the Authority's CII Program at this time.

3. Benefit Summary and Breakdown

PROP 13

The Multi-Load, Coin-Op Voucher Project is consistent with PROP 13's objectives as identified in the Proposition 13 Urban Water Conservation Program. The Authority will use information from this program to determine the most effective way to transform the Laundromat market to high-efficiency machines.

During the four years that the Authority has offered vouchers for coin-operated clothes washers, only a few of the $300 vouchers each year were used to purchase multi-load coin-ops. The $300 voucher was insufficient incentive for machines costing $3,000 to $5,000 although the lifetime utility (water, sewer, gas, and electric) savings are significant. The 500 vouchers funded in part by PROP 13 will enable local water districts to achieve savings and to achieve them much sooner than would have been realized without the additional voucher funding. Lifetime water savings for this project are estimated to be an average of 1,108 AF. Information developed as a result of this

study can be applied throughout urban California. This study can also help PROP 13's efforts to develop financial incentive programs for its Water Use Efficiency Program.

Metropolitan Water District of Southern California Service Area
Once water savings benefits are determined, Metropolitan has indicated a willingness to include MLs into their existing menu of their regional CII Rebate Program water savings devices.

Community
This program may provide training and employment to disadvantaged communities as old machines are removed and new machines are installed.

San Diego County Water Authority
The Authority's 2000 Urban Water Management Plan (UWMP) assumes that all cost-effective water conservation methods will be fully implemented. The water savings achieved through all the water conservation efforts (including the Multi-Load, Coin-Op Voucher Project) enables the Authority to reduce the size of its facilities accordingly. The 2000 UWMP sets a water conservation goal 93,200 AF by 2020. This project is one step of many that will enable the Authority to meet that goal.

Laundromat Owners
Utility expenses are a major part of the cost of doing business for small businesses such as Laundromat owners. A voucher to purchase more efficient equipment enables Laundromat owners to upgrade in a business sector with little money available for capital outlay. Laundromat owners stated in focus groups that they are aware of the significant utility savings but simply do not have the funding to upgrade. The trend in the laundry industry is to retain small numbers of STLs and replace machines in the remaining floor space with highly efficient multi-loaders. A voucher at a level sufficient to enable the owners to make the changes will greatly accelerate the market transition and achieve savings as early as possible.

Laundromat Customers
Most customers using Laundromats are apartment dwellers, many of whom are in the low to middle income brackets. Customers who routinely use Laundromats realize the benefit of using ML coin-ops to do large amounts of laundry quickly at relatively low cost. MLs save money not only in the vend price of the washer, but also for dryers as the clothes spin dryer than SLTs. Another advantage of the high-efficiency washers is the reduced amount of detergent required.

SDG&E
Kilowatt savings per machine are relatively minor compared to many other commercial and industrial SDG&E customers, however, the number of machines in the total market is large. There are an estimated 200 – 225 Laundromats in the service area with 30 - 35 machines each. Laundromat owners have expressed the goal of replacing one-half of SLTs with MLs making the installation goal about 3,000 MLs.

In 2001, SDG&E was buying natural gas at $1.20/Therm and buying electricity at an average of $0.20 per kilowatt. Although future gas and electric prices are undetermined at this time, SDG&E's current avoided cost for the 10-year life of one 35-lb. ML machine is approximately $492.76 for electricity and $2,628 for natural gas. By comparison, the avoided costs for water is $558.40.

One of the most important benefits of a cooperative effort among water and energy utilities is that neither agency alone can provide a voucher large enough to bring about the desired market changes. Energy and water agencies together provide better service to their mutual customers than either agency alone. Information gained from this program may be easily expanded to similar applications for both energy and water agencies here in San Diego and in other parts of the state.

4. Assessment of Costs and Benefits

Table 3 -- Summary of Quantified and Non-Quantified Costs and Benefits

Item	Amount	Units	Qty	Total Cost	Units	Life (years)	Present Value	Beneficiary
Quantified Costs								
Program Mgmt	$20,720	$/yr	2	$20,720	$/yr.	2	$18,994	N/A
Monitoring (QA)	$600	$/yr.	2	$600	$/yr.	2	$550	N/A
Verification of Water Savings	$100,000	$/yr.	2	$100,000	$/yr.	2	$94,340	N/A
MLs HEWs	$775	$/machine	500	$387,500	500	1	$365,566	N/A
Program Admin.	$55	$/machine	500	$27,500	500	2	$25,943	N/A
Subtotal				**$536,320**			**$505,393**	
Quantified Benefits								
Water Savings	1,108	acre-foot	$484	$536,272		10	$427,959	Water Dist., Ratepayers
Non-Quantified Costs. None.								
Non-Quantified Benefits								
Water supply reliability & avail.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Water Dist., Ratepayers
Improve H2O Qual.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	CALFED, Water Dist.
Improved Ecology	N/A	N/A	N/A	N/A	N/A	N/A	N/A	CALFED
Pump. Reduction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	CALFED

Analysis Assumptions

- Present value of costs and benefits are provided in year 2001 dollars.
- All dollars have been rounded.
- Annualized 6% discount rate.
- Calculated water purchase cost at 3% annual increase
- Annualized cost of water @ 6% discount rate is $646/AF.

The total cost of the Coin-Operated Multi-Load Clothes Washer Voucher Incentive Program over 2 years is $505,393 in present value dollars. The local cost is $175,204 in present value dollars. The direct benefit to the Authority is 1,108 acre-fee of reliable water that offsets the expense of importing water. Since the cost to the Authority is $175,204 in present value dollars, and the benefit to the Authority is $427,959 in present value dollars, this program is locally cost effective ($427,959 / $175,204 = 2.44).

Table 4

Item	Amount	Total Cost	Term (Years)	Total Cost (present value)	State Cost (present value)	Local Cost (present value)
Program Mgt.	$20,720	$20,720	2	$18,994	0	$18,994
Monitoring	$600	$600	2	$550	0	$550
Verification	$100,000	$100,000	2	$94,340	$94,340	0
ML HEWs	$775/ML	$387,500	2	$365,566	$235,849	$129,717
Program Admin.	$55	$27,500	2	$25,959	0	$25,943
Subtotal				$505,409	$330,189	$175,204
Present value of costs are provided in year 2001 dollars. Annualized 6% discount was used. All dollars have been rounded.						

Table 5
Breakdown of Funding and Expenditures for Multi-Load Clothes Washer Voucher Program

Funding Sources				Expenditures	
PROP 13	Metropolitan	Authority	Member Agencies	HDMC Admin Fee/Marketing	Customer Voucher $ Amount
$500	$250	$40	$40	$55	$775

Savings Estimates from Manufacturer's Data

- Three of the largest machines will occupy the same space as four SLTs, therefore assume approximately a one-for-one rate of exchange. Floor space is the primary limiting factor in most Laundromats making it difficult to install a new machine unless another machine is removed.
- Multi-load machines have a useful Laundromat life of at least 10 years and are used about 5 times per day.

- Data from the following table is taken from specification sheets provided by Maytag and discussions with Maytag technical staff. Maytag machines were used, as they are some of the most commonly installed machines and models from the same maker provide more comparable data. A number of excellent machines by other makers are also on the market.
- Data for single load HEWs is presented to provide perspective as it is the product rejected by Laundromat owners in preference to MLs.
- Pounds of laundry per load were chosen as a basis of comparison rather than tub size as pounds of laundry drive the amount of water required and hence energy.

Table 6
Single Top Loader and Multi-Loader Comparison

Maytag	Top-Single	Front-Single	35-Pound 2-Speed	35-Pound 3-Speed	55-Pound 2-Speed	55-Pound 3-Speed
Pounds Rated	12	14	35	35	55	55
Pounds Typical	7.92	9.24	23.1	23.1	33	33
Tub size in cubic feet	2.5	2.9	5.76	5.76	8.18	8.18
Gallons/Load	31.5	21.5	62.2	62.2	80.9	80.9
Average Hot Water/Load	6.5	2.5	7.5	7.5	10.2	10.2
Therms/Load Hot Water	0.433	0.167	0.500	0.500	0.680	0.680
kWh/Load	0.15	0.1	0.3	0.4	0.42	0.55
RMC %	75	60	73	73	73	73
RMC Pounds	5.9	5.5	16.9	16.9	24.1	24.1
Therms/Dryer	0.128	0.119	0.363	0.363	0.518	0.518

Although this proposal is for funding for water savings, given the continuing energy issues in the state, the energy savings are a vital conservation component and are provided here to show the total project benefits.

Assumptions for Table 6:

- The Maytag technician states that the number of pounds of Laundry per load is about 66% of the rated capacity as determined by Maytag studies at Laundromats.
- Therms required for hot water heating is equal to the number of gallons of water x 8.33 pounds of water per gallon x 0.0001Therms required to heat one pound of water one degree. Water temperature coming into the boiler is a year round average temperature of 60° and is heated to 140° for a difference of 80°.

Example:
6.5 gal. X 8.33 lbs. water/gal. X 0.0001 Therms x 80° = 0.433 Therms

- Remaining Moisture Content (RMC) is the amount of water remaining in the laundry after all cycles.
- RMC Pounds is the pounds of water remaining in the laundry and is equal to the pounds of laundry x RMC%.
- Therms/Dryer is equal to pounds of water x 2 cubic feet of gas needed to remove one pound of water divided by 93 cubic feet of gas per Therm.
  Example:
  5.9 lbs. water x 2 cf. gas / 93 cf. gas/Therm = 0.128 Therms

35-Pound Multi-Loader Example:

23.1 lbs./ 7.92 lbs. = 2.9 single loads

Water:
31.5 gallons/SLT x 2.9 = 91.35 gallons of water required to do the same amount of laundry as one load in a 35-lb. multi-loader
91.35 – 62.2 = 29.15 gallons saved/load
29.15 x 5 loads day x 365 days x 10 years / 325,900 gal/AF =
1.6 AF Lifetime Savings

Electricity:
0.15 kWh per load x 2.9 = 0.435 kWh
0.435 kWh – 0.3 = 0.135 kWh saved/load
0.135 x 5 x 365 x 10 = **2,463.8 kWh Lifetime Savings**

Gas (Therms):
0.433 (washer) + 0.128 (dryer) = 0.561 Therms/STL
0.5 (washer) + 0.363 (dryer) = 0.863 Therms/ML
0.561 x 2.9 = 1.627 Therms
1.67 – 0.863 = 0.764 Therms
0.764 x 5 x 10 x 365 = **13,943.0 Therms Lifetime Savings**

55-Pound Multi-Loader Example:

33 lbs./ 7.92 lbs. = 4.17 single loads

Water:
31.5 gallons/SLT x 4.17 = 131.36 gallons of water required to wash the same amount of laundry as one load in a 55-lb. multi-loader.
131.36 – 80.9 = 50.46 gallons saved/load
50.46 x 5 loads day x 365 days x 10 years / 325,900 gal/AF =
2.83 AF lifetime savings

Electricity:
0.15 kWh per load x 4.17 = 0.626 kWh
0.626 kWh – 0.42 = 0.206 kWh saved/load
0.206 x 5 x 365 x 10 = **3,759.5 kWh Lifetime Savings**

Gas (Therms):
0.433 (washer) + 0.128 (dryer) = 0.561 Therms/STL
0.68 (washer) + 0.518 (dryer) = 1.198 Therms/ML
0.561 x 4.17 = 2.339 Therms
2.339 – 1.198 = 1.141Therms saved/load
1.141 x 5 x 365 x 10 = **20,823.25 Therms Lifetime Savings**

Avoided Cost for Local Water Agencies

SDCWA:
35-Pound Multi-Loader
1.60 AF Lifetime Savings x $349 (untreated, non-interruptible)/AF = $558.4/machine
55 Pound Multi-Loader
2.83 AF Lifetime Savings x $349/AF = $987.67

Authority Member Agency:
35-Pound Multi-Loader
1.60 AF Lifetime Savings x $434 (untreated, non-interruptible)/AF = $694.40
55-Pound Multi-Loader
2.83 AF Lifetime Savings x $434/AF = $1,228.22

SDG&E:
Given the fluctuations in gas and electricity, SDG&E is unable to provide a precise avoided costs at this time. However, at this writing, they are buying gas at $1.20/Therms and electricity at $0.20 per kilowatt.

35-Pound Multi-Loader
2,463.8 kWh x $0.20/kWh = $492.76
13,943.0 Therms x $1.20/Therms = $16,731.60

55-Pound Multi-Loader
3,759.5 kWh x $0.20.kWh = $751.90
20,823.3 Therms x $1.20 = $24,987.96

Annual Laundromat Owner Savings

Building upon the calculations shown above, a Laundromat owner can expect an annual combined water, sewer, kWh (capped rate) and gas savings of **$2,609.96** from one 35-pound multi-loader compared to the same amount of laundry washed in single, top loaders. Savings from a 55 pound machine are calculated to be **$3,948.42** at the capped rate. Water and sewer rates are from the City of San Diego, the largest retail agency in the region. The calculations are shown below.

35-Pound Multi-Loader

Water:
29.15 gallons x 5 x 365 / 748 gallons per unit x $1.47 per unit = $104.55

Sewer:
29.15 gallons x 5 x 365 / 748 x 0.85 return rate x $1.97 = $119.09

KWh:
0.135 kWh x 5 x 365 x $0.065/kWh capped rate = $16.01
0.135 kWh x 5 x 365 x $0.20/kWh projected annual rate = $49.28

Therms:
0.764 Therms x 5 x 365 x $1.70/Therms = $2,370.31

55-Pound Multi-Loader

Water:
50.46 gallons x 5 x 365 / 748 gallons per unit x $1.47 = $180.98

Sewer:
50.46 gallons x 5 x 365 / 748 x 0.85 return rate x $1.97/unit = $206.15

KWh:
0.206 kWh x 5 x 365 x $0.065/kWh capped = $24.44
0.206 kWh x 5 x 365 x $0.20/kWh uncapped = $75.19

Therms:
1.14 Therms x 5 x 365 x $1.70/Therms = $3,536.85

E. Outreach, Community Involvement and Acceptance

The project benefits low-income individuals in that it will reduce increases in energy, water, and sewer costs for Laundromat operators. In the San Diego area, the high cost of housing means that many low-income families live in apartments without in-unit washers and dryers and therefore use Laundromats for all washing needs. This sector

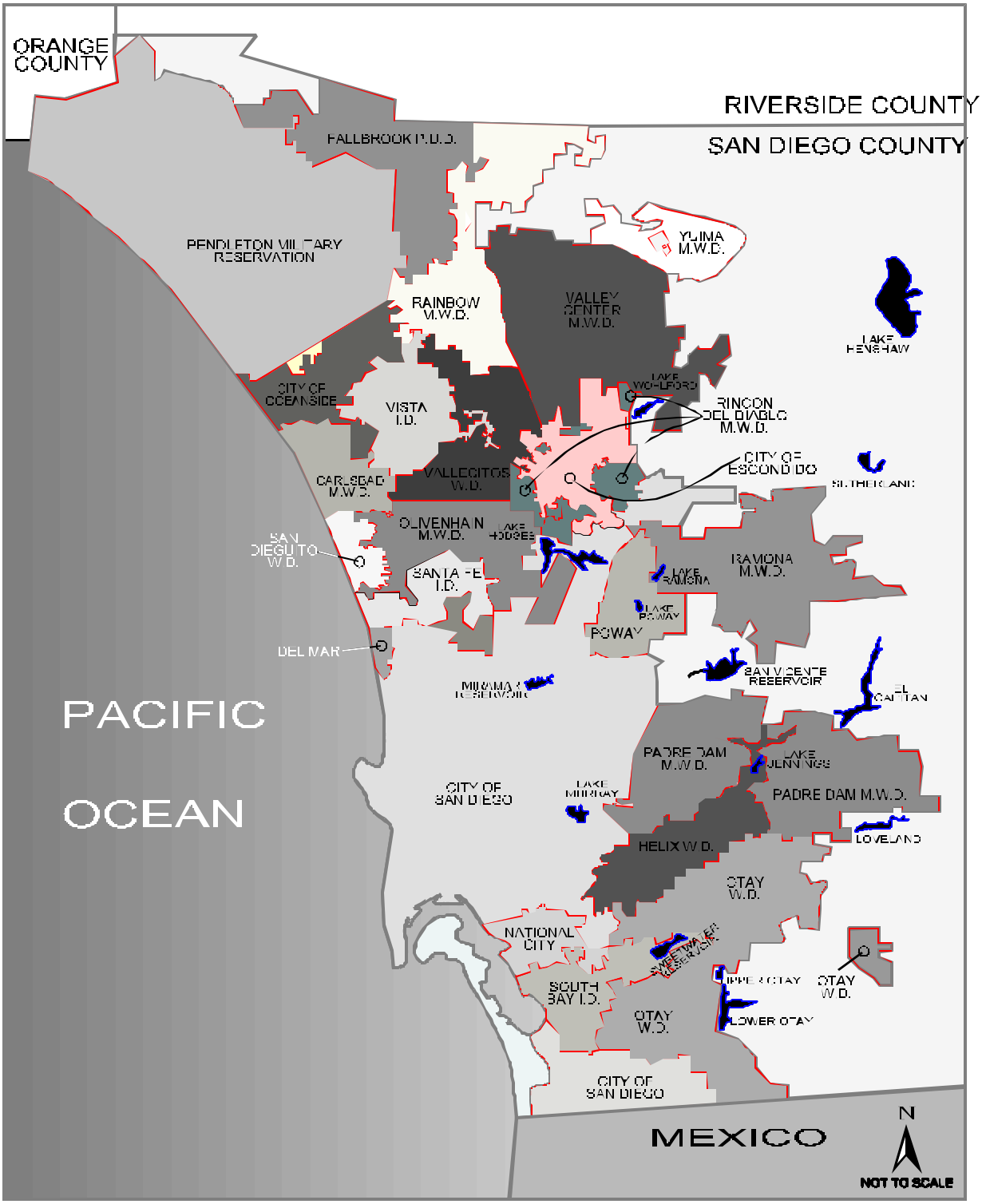
is well aware of the benefits of using multi-load machines to quickly take care of family laundry needs. Laundromats will be encouraged to participate in the program to meet this sector's needs through assertive marketing.

New immigrants and small businesses form a significant sector of the Laundromat owners' community and are the sector with the least capital to invest in new, efficient machines. Vouchers will enable them to remain viable in an industry seriously impacted by high utilities and to continue to serve their low-income customers.

The sector most impacted by this program is the Laundromat industry. They have provided their opinions as well as technical and financial data to develop this pilot. The Laundry industry states with no exaggeration at all that their livelihood depends upon becoming as energy and water efficient as possible.

The Authority is strongly committed to its Small Contractor Outreach and Opportunity Program (SCOOP) and expects Authority contractors to demonstrate commitment to equal economic opportunity as well. Contractors are strongly recommended to make meaningful subcontracting and employment opportunities available to all interested and qualified firms and individuals, including small businesses that are owned and controlled by a socially and economically disadvantaged individual(s) or a disabled veteran(s). The current contract subcontracts marketing/customer outreach, software development, printing, and graphic design to SCOOP qualified businesses.

All information gained from this program will be available to any interested parties. The Authority leads water agencies throughout the State in development of this type of program. Authority programs have provided more vouchers for coin-op HEWs than any other water agency in the State. The ML project is a logical next step to that effort. Over the years, the Authority has consistently shared this information via the California Urban Water Conservation Council (CUWCC); conservation related conferences and numerous informal discussions with water and energy agencies throughout the state and nation.


ORANGE COUNTY
RIVERSIDE COUNTY
SAN DIEGO COUNTY
FALLBROOK P.U.D.
PENDLETON MILITARY RESERVATION
YUIMA M.W.D.
RAINBOW M.W.D.
VALLEY CENTER M.W.D.
LAKE HENSHAW
CITY OF OCEANSIDE
VISTA I.D.
LAKE WOHLFORD
RINCON DEL DIABLO M.W.D.
CITY OF ESCONDIDO
VALLECITOS W.D.
CARLSBAD M.W.D.
OLIVENHAIN M.W.D.
LAKE HODGES
SAN DIEGUITO W.D.
SANTA FE I.D.
RAMONA M.W.D.
LAKE RAMONA
LAKE POWAY
POWAY
DEL MAR
MIRAMAR RESERVOIR
SAN VICENTE RESERVOIR
EL CAPITAN
PACIFIC
OCEAN
PADRE DAM M.W.D.
LAKE JENNINGS
CITY OF SAN DIEGO
LAKE MURRAY
PADRE DAM M.W.D.
LOVELAND
HELIX W.D.
OTAY W.D.
NATIONAL CITY
SWEETWATER RESERVOIR
UPPER OTAY
OTAY W.D.
SOUTH BAY I.D.
OTAY W.D.
LOWER OTAY
CITY OF SAN DIEGO
MEXICO
N
NOT TO SCALE

Attachment B

ROSE M. SMUTKO

CII Voucher Incentive Program Manager
San Diego County Water Authority
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Telephone: 858/522-6756
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San Diego County Water Authority

Program Manager of the Commercial, Industrial, and Institutional (CII) Voucher Incentive Program for the San Diego County Water Authority. Supervise and evaluate consultant's work in implementation of and evaluation of point-of-purchase conservation program. The CII Program provides vouchers to customers purchasing water efficient equipment in CII settings. CII products include ultra-low-flush toilets, urinals, waterless urinals, coin-operated high-efficiency clothes washers, and cooling tower conductivity controllers. Work in partnership with the Authority's twenty participating member agencies to market the Program to their customers.

Program Manager of the Residential Survey at the Authority. The Residential Survey Program provides water conservation surveys to target single-family homes, as well as multi-family properties with less than two acres of irrigated landscape.

City of San Diego

Program Manager of the Ultra-Low-Flush Toilet Rebate Program for the City of San Diego. Managed day-to-day operation of a program, which involved ongoing communication with contract administrator and customers. Prepared and submitted Manager's Reports, request for proposals, customer correspondence, forms, spreadsheets, and statistical data on water savings. Provided water conservation and rebate program information through presentations to various community and professional groups. Assisted in determining future advertising and marketing strategies.

Program Manager of the Community-Based Organization for Ultra-Low-Flush Toilet Distribution Program for the City of San Diego. Initiated procedures to optimize ongoing positive cooperation between nonprofit organizations and city staff.

Coordinator of the Strategic Plan for Future Water Supply for the Water Department at the City of San Diego. This innovative process partnered with stakeholders consisting of community leadership in the participation in planning for future water supply. The Strategic Plan was recognized at the Orchids & Onions Award Ceremony.

Education

Masters Degree in Business Administration, National University, San Diego, CA.
Masters Degree in Public Administration, National University, San Diego, CA.
Bachelor of Arts Degree, Mary Manse College, Toledo, Ohio.